

## **REMARKS**

### **I. Overview**

Claims 1-16 are pending in the present application. Claim 16 has been amended. The outstanding issues raised in the Non-Final Office Action of January 3, 2007 (*Office Action*) are as follows:

- The Specification stands objected to due to informalities;
- Claim 16 stands objected to due to informalities;
- Claims 1-5, 7-12, and 14-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,462,046 (*Spight*); and
- Claims 6 and 13 rejected under 35 U.S.C. § 103(a) as being unpatentable over *Spight* in view of U.S. Patent No. 5,224,174 (*Schneider*).

In response, Applicant respectfully traverses the outstanding claim rejections, and requests reconsideration and withdrawal in light of the remarks presented herein.

### **II. Amendments to the Specification**

The specification has been amended to correct minor inadvertent errors pointed out by the Examiner. *Office Action*, at p. 2. No new matter has been added with these amendments. Applicant thanks the Examiner for noting the errors, and respectfully requests that the objection of record with respect to the Specification be withdrawn in light of the foregoing amendments.

### **III. Amendments to the Claims**

Claim 16 has been amended to correct the form of a previously recited Markush group by changing the phrase “from a group consisting of” into the phrase “from the group consisting of,” as requested by the Examiner. *Office Action*, at p. 2. No new matter has been added, and this amendment is not intended to narrow the scope of the claim. Again, Applicant thanks the

Examiner for pointing out the inadvertent mistake, and respectfully requests that the objection of record with respect to claim 16 be withdrawn in light of the present amendment.

#### **IV. Claim Rejections Under 35 U.S.C. § 102(b)**

Claims 1-5, 7-12, and 14-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Spight*. *Office Action*, at p. 3. Applicant traverses the rejection and asserts that these claims are allowable, at least, for the reasons stated below.

To anticipate a claim under 35 U.S.C. § 102, a single reference must teach each and every element of the claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). In fact, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). Furthermore, for a reference to be anticipatory, “[its] elements must be arranged as required by the claim.” *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990), *cited in* M.P.E.P. § 2131.

##### **A. Independent Claims 1, 8, 15, and 16**

Claim 1 recites, in part, “performing a first optical transform on the light to yield a first optically transformed light . . . [and] generating a first metric in accordance with the first optically transformed light . . .” The Examiner contends that *Spight*’s Fourier transform meets the claimed “first optical transform,” and that its resulting Fourier transformed signal meets the claimed “metric.” *Office Action*, at p. 2. In response, Applicant respectfully asserts that *Spight*’s Fourier transformed signal is not a metric.

The plain language of claim 1 distinguishes the term “metric” from the term “optically transformed light” by requiring that the claimed metric be generated *in accordance with* optically transformed light. Furthermore, illustrative passages of the present specification describe a processor receiving an optically transformed signal from a sensor and generating a metric in response to the optically transformed signal. *E.g.*, *Specification*, at p. 7, lns. 6 and 7. Clearly, the terms “optically transformed light” and “metric” are used to mean different things. *Compare*

*e.g.*, *Specification*, at p. 5, ln. 30—p. 6, ln. 28, *with Specification*, at p. 7, lns. 6-18. When evaluating the scope of a claim, every limitation in the claim must be considered. *See, e.g., In re Ochiai*, 71 F.3d 1565, 1572, 37 U.S.P.Q.2d 1127, 1133 (Fed. Cir. 1995). In this case, by improperly equating an optically transformed signal (*i.e.*, *Spight*'s Fourier transformed signal) with the claimed “metric,” the Examiner has not considered every limitation of the claim. Applicant asserts that *Spight* does not teach generating metrics, much less “generating a first metric in accordance with the first optically transformed light,” as recited in claim 1.

Accordingly, the 35 U.S.C. § 102(b) rejection of record with respect to claim 1 should be withdrawn. For the same reasons, the 35 U.S.C. § 102(b) rejection of record with respect to claims 8, 15, and 16 should also be withdrawn.

B. Dependent Claims 2-5, 7, 9-12, and 14

Dependent claims 2-5, 7, 9-12, and 14 depend either directly or indirectly from claims 1 and/or 8, each dependent claim thus inheriting all the limitations of its respective independent claim. As noted above, *Spight* does not teach every element of independent claims 1 nor 8. Consequently, *Spight* also fails to teach every element of dependent claims 2-5, 7, 9-12, and 14. Accordingly, Applicant respectfully requests that the Examiner withdraw the 35 U.S.C. § 102(b) rejection of record with respect to claims 2-5, 7, 9-12, and 14. Moreover, each of these claims recites elements not taught by *Spight*.

For example, claim 3 recites that “the first optical transform is compatibly different from the second optical transform,” and claim 10 recites similar features. Applicant respectfully points out that *Spight* only describes passing its object and reference signals through Fourier transform lenses. *Spight* at col. 4, lns. 27-63. Therefore, *Spight* does not teach applying different transforms to each signal, much less “compatibly different” transforms, as recited in claim 3 and 10. Applicant also points out that *Spight* requires that both of its signals be processed with the same transform. *E.g., id.* at col. 4, ln. 55—col. 5, lns. 64. Accordingly, the 35 U.S.C. § 102(b) rejection of record with respect to claims 3 and 10 should be withdrawn.

Claim 5 recites “selecting first data from the first metric; selecting second data from the second metric; and fusing the first data and the second data to yield the processed metric,” and claim 12 recites similar features. Again, *Spight* does not teach generating any metrics, as the term is used in the claims. Therefore, *Spight* does not teach selecting first data from a first metric, selecting second data from a second metric, and fusing the first data and the second data to yield a processed metric, as recited in claims 5 and 12. Accordingly, the 35 U.S.C. § 102(b) rejection of record with respect to claims 5 and 12 should be withdrawn.

Claim 6 recites “generating the processed metric in response to the first metric and the second metric; and detecting a target using the processed metric,” and claim 13 recites similar features. Again, *Spight* does not teach generating any metrics, as the term is used in the claims. Therefore, *Spight* does not teach generating a processed metric in response to a first and second metrics and detecting a target using the processed metric, as recited in claims 6 and 13. Accordingly, the 35 U.S.C. § 102(b) rejection of record with respect to claims 6 and 13 should be withdrawn.

Claim 7 recites “generating an image from the processed metric; and displaying the image,” and claim 14 recites similar features. Again, *Spight* does not teach generating any metrics, as the term is used in the claims. Therefore, *Spight* does not teach generating an image from a processed metric and displaying the image, as recited in claims 7 and 14. Accordingly, the 35 U.S.C. § 102(b) rejection of record with respect to claims 7 and 14 should be withdrawn.

#### **V. Claim Rejections Under 35 U.S.C. § 103(a)**

Claims 6 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Spight* in view of U.S. Patent No. 5,224,174 (*Schneider*). Applicant traverses the rejection and asserts that these claims are allowable, at least, for the reasons stated below.

As a preliminary matter, in order to establish a prima facie case of obviousness under 35 U.S.C. § 103(a), the references relied upon must be at least analogous art. M.P.E.P. §

2141.01(a). In other words, the references “must either be in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the invention was concerned.” *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992), *cited in* M.P.E.P. § 2141.01(a). Applicant respectfully asserts that the rejection of record does not satisfy this criteria.

In addition, three other criteria must be met. *See* M.P.E.P. § 2143. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the references’ teachings. *Id.* Second, there must be a reasonable expectation of success. *Id.* Finally, the reference (or references when combined) must teach or suggest all the claim limitations. *Id.* Applicant contends that the rejection of record does not satisfy these criteria.

A. Non-Analogous Art

The rejection of claims 6 and 13 should be withdrawn because *Schneider* is non-analogous art. Particularly, the present invention “relates generally to the field of **electro-optical systems** and more specifically to image processing using optically transformed light.” *Specification*, at p. 1 (emphasis added). Meanwhile, *Schneider* discloses “[a]n **ultrasonic system** and method for imaging a surface.” *Schneider*, at Abstract (emphasis added). Therefore, *Schneider* is not in the field of Applicant’s endeavor—*i.e.*, ultrasonic systems are clearly **not** electro-optical systems. Further, *Schneider* is not pertinent to the particular problem with which the invention was concerned—*i.e.*, *Schneider*’s system utilizes mechanical ultrasonic waves, rather than optically transformed light.

Because *Schneider* is non-analogous art, use of *Schneider* as part of a combination of references to establish a rejection under 35 U.S.C. § 103(a) is improper. M.P.E.P. § 2141.01(a). Accordingly, Applicant respectfully requests that the Examiner withdraw the 35 U.S.C. § 103(a) rejection of record with respect to claims 6 and 13.

B. Insufficient Motivation

The rejection of claims 6 and 13 should also be withdrawn because there is insufficient motivation for a combination of *Spight* with *Schneider*. In support for the proposed combination, the Examiner states that:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify *Spight*'s method by including the capability of detecting a target using the processed metric to the processor that yields the processed metric ***in order to incorporate the capability of performing fingerprint pattern recognition.***

*Office Action*, at pp. 7 and 8 (emphasis added). However, the disclosure of *Spight* "relates to a system for facilitating near real-time vision for a manufacturing processing machine." *Spight*, at col. 1, lns. 7-10. There is absolutely no reason why a person of ordinary skill in the art would be inclined to add fingerprint recognition capabilities into the manufacturing processing machine of *Spight*.

In addition, it is unclear how the addition of *Schneider*'s fingerprint recognition into *Spight* would in fact benefit *Spight*, if at all. Again, *Spight*'s goal is to provide system for facilitating near real-time vision for a manufacturing processing machine. *Spight*, at col. 1, lns. 7-10. The fingerprint recognition of *Schneider* does not advance *Spight*'s objective in any way. In fact, the Examiner's stated motivation for adding *Schneider* to *Spight* to provide "the capability of performing fingerprint pattern recognition" is circular in nature, stating that it is obvious to incorporate *Schneider*'s features into *Spight* into order to have *Schneider*'s features in *Spight*. This is merely a statement that the references ***can be*** combined and provides no motivation for making the combination. The mere fact that references ***can be*** combined does not render the resultant combination obvious unless the applied art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990), *cited in* M.P.E.P. § 2143.01.

Furthermore, the Examiner has not provided any meaningful indication of how the proposed combination would be made, and Applicant contends these references cannot be easily

combined. Applicant re-asserts that *Schneider*'s system utilizes mechanical ultrasonic waves, whereas *Spight* utilizes optical waves. Because the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. See *In re Ratti*, 270 F.2d 810, 843, 123 U.S.P.Q. 349, 352 (C.C.P.A. 1959).

In sum, the 35 U.S.C. § 103(a) rejection of record based upon a combination of *Spight* with *Schneider* is improper. Accordingly, Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of record with respect to claims 6 and 13 be withdrawn.

C. Lack of All Claimed Elements

Dependent claims 6 and 13 depend either from claims 1 and 8, respectively, each dependent claim thus inheriting all the limitations of its respective independent claim. As noted above, *Spight* fails to teach or suggest all of the limitations of independent claims 1 and 8. The Examiner has not relied upon *Schneider* as teaching or suggesting those limitations, and Applicant respectfully asserts that *Schneider* does not cure those deficiencies. Consequently, the combination of *Spight* and *Schneider*, even if proper, fails to teach or suggest all of the limitations of dependent claims 6 and 13. Accordingly, Applicant respectfully requests that the Examiner withdraw the 35 U.S.C. § 103(a) rejection of record with respect to claims 6 and 13.

**VI. Conclusion**

In view of the above, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2380, under Order No. 46030/P044US/10407181 from which the undersigned is authorized to draw.

Dated: April 3, 2007

Respectfully submitted,

By 

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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is e-filed on the date shown below.

Dated: April 3, 2007

Signature: 

Jay H. Perigo